



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,209	09/25/2002	Larry L. Longden	73591	8169
22242	7590	10/29/2004	EXAMINER	
FITCH EVEN TABIN AND FLANNERY 120 SOUTH LA SALLE STREET SUITE 1600 CHICAGO, IL 60603-3406			FARAHANI, DANA	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,209

Applicant(s)

LONGDEN ET AL.

Examiner

Dana Farahani

Art Unit

2814

aw

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 8-10, 19-22, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of the Japanese patent 357145345, hereinafter '345 reference, and further in view of the Japanese patent 2001189876, hereinafter '876 reference, all previously cited.

Regarding claims 1-4 and 8-10, AAPA discloses in figure 1, a radiation shielding integrated circuit device comprising a base 110, a radiation shielding top 104 coupled to the base; and a radiation shielding bottom 102 coupled to the base.

AAPA does not disclose the electronic circuit device coupled to an x-ray shielding layer.

The '345 reference discloses in figure 2, an element 3 is protected from radiation by layers 4 and 6. The '345 reference does not disclose the layers are for x-ray shielding.

The '876 reference discloses an x-ray radiation protection circuit (see the abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the layers in the '345 reference x-ray resistance in order to protect the circuit of AAPA from x-ray radiation.

Regarding claims 5, 19, 20, 25 and 26, note that AAPA further discloses first and second dies 104. AAPA in view of the '345 and '876 reference renders obvious the claimed invention,

Art Unit: 2814

except for disclosing the thickness of the top shield layer is greater than that of the bottom shield.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the thickness of the bottom/top electrode in order to modify the protection angle of the device in various environments. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claims 21 and 22, it would have been obvious to one of ordinary skill in the art to also include spacing ring at the bottom shielding layer, similar to the top layer in order to further secure the base.

3. Claims 6, 7, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of the '345 and '876 reference as applied to claim 1 above, and further in view of Bloch et al., hereinafter Bloch (US Patent 5,086,443), previously cited.

AAPA in view of the '345 and '876 reference renders obvious the claimed invention, except for the shield layers comprising high and low Z materials.

Bloch discloses an x-ray mirror comprising low and high Z material (see column 2, lines 10-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the shielding layers with these materials in order to improve their x-ray shielding function.

Response to Arguments

4. Applicants' arguments filed 8/2/04 have been fully considered but they are not persuasive.

Art Unit: 2814

Applicants argue that the burden of making a prima facie case of obviousness is not met by the examiner. Specifically, applicants argue that the circuit in the '876 reference is directed to an electronic circuit handling x-ray radiation, and that this circuit is in no way analogous or similar to applicants' claimed "x-ray shielding layer" (page 3, paragraph 2 of the applicants' remark section). However, the '867 reference is merely cited to indicate that there is a concern over x-ray exposure in electronic chips, or circuits, and the reference is not used to render obvious the structural limitation that of the x-ray protection layer in the claims. The layers that would protect a chip, or a circuit are shown in the '345 reference. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding applicants' argument that there is no reference(s) disclosing the limitation in claim 5, namely the second thickness being greater than the first thickness in, note that as case laws make it clear, a modification in size, as stated in the above case law in the rejection, and discovering an optimum value are recognized as being within the level of ordinary skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Regarding applicants' argument that the Office has taken official notice in rejecting claims 20, 22, 25, and 26, the Office notes that the limitations in those claims are functional, which are inherently present in the device of AAPA in view of '345 and '876 references.

Regarding applicants' request of a reference to show spacing rings coupled to radiation shields, see the Japanese patents 62150776-A incorporated with this office action as a reference.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

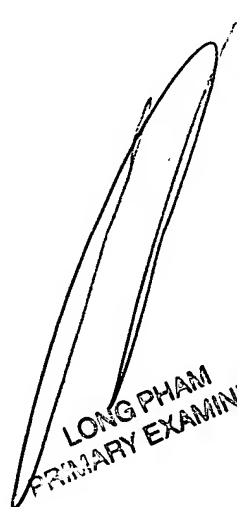
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Farahani whose telephone number is (571)272-1706. The examiner can normally be reached on M-F 9:00AM - 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M Fahmy can be reached on (571)272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2814

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. Farahani



LONG PHAM
PRIMARY EXAMINER